

Summary of Events in Cellular Respiration			
Name of Stage	Site in Cell	Net ATP	What Happens
a) Glycolysis	Cytoplasm	2	Glucose is broken down into pyruvate
b) Krebs Cycle	Mitochondria	2	Each pyruvate is broken down into Acetic Acid , CO <sub>2</sub> and Water
c) Electron Transport Chain	Mitochondria	32	Each Acetic Acid molecule is completely broken down

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Summary of three energy systems p86 text Work on Energy Systems Worksheet	
1. Adenosine Triphosphate	
2. Adenosine molecule attached to 3 phosphate molecules	
3. Energy is stored in the phosphate bonds	
4. 7.6 kcal	
5. ATP (ase) All enzymes end in the same. Breaks down the final phosphate molecule (3rd) and creates ADP + P	
6. Left over ADP is recycled through phosphorylation	
7. ATP-PC System (anaerobic alactic), Glycolysis System (anaerobic lactic), Oxidative System (aerobic alactic)	
8. PC = P + Creatine	
ADP + P = ATP	
9. The fuel source is phosphocreatine and it is found in muscles	
10. Creatine kinase is the enzyme that breaks it down	
11. 1 ATP is the net yield for this system	
12. 0-15 seconds *7 seconds max	
13. Power events	
14. Limited phosphocreatine stores	
15. Glycolysis System, Glucose and Glycogen are the fuel sources found in blood	
16. Lactic Acid	
17. 2 ATP, 15-120 seconds	
18. Lactic acid build up in the muscles, impairs the use of the muscles	
19. Oxidative System, train your cardiovascular to optimize this energy system	
20. Carbohydrates, Fats, Proteins	
21. Oxidative phosphorylation	
22. 120 seconds + until 2 hours +	
23. Aerobic activity	
24. Beginning pyruvic acid + oxygen = acetyl coA	
Oxygen bonds with H <sup>+</sup> to create water for thermo regulation	
25. NADH's and FADH's	
26. Carbon dioxide and water	
27. 36 ATP	
28. Cardiovascular training (health)	
29. Absolutely, increase the concentration of oxygen in the body	
30. Carbohydrates oxidizes most efficiently then fats then proteins	
31. Very inefficient high O2 demands - over training	

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